

IN THE CLAIMS

Please amend the claims as follows:

1. (original) A device for producing images of an object (5) that is subject to a cyclic spontaneous movement, comprising
 - a) an X-ray unit (1) for producing a series of two-dimensional projected pictures of the object (5);
 - b) a measuring device (4, 7) for determining a parameter characteristic of the spontaneous movement of the object (5);
 - c) a data processing device (10) that is coupled to the X-ray unit (1) and the measuring device (4, 7) and that is designed to drive the X-ray unit (1) as a function of the particular value of the characteristic parameter in such a way that, during a predetermined movement phase to be displayed, pictures are taken of the object (5) with a higher X-ray exposure rate and/or picture-taking rate than during the other movement phases.

2. (original) A device as claimed in claim 1, characterized in that the data processing device (10) is designed to adjust the picture-taking rate, the X-ray pulse duration, the tube current and/or the tube voltage of the X-ray unit (1).

3. (original) A device as claimed in claim 1, characterized in that the object is a heart (5).

4. (original) A device for controlling the injection rate of a contrast agent in a vascular system, comprising

a) an injection pump (8) for injecting the contrast agent at a controllable injection rate;

b) a measuring device (4, 7) for determining the parameter characteristic of the flowrate in the vascular system;

c) a control unit (10) that is coupled to the injection pump (8) and the measuring device (4, 7) and is designed to drive the injection pump (8) as a function of the particular value of the characteristic parameter in such a way that the contrast agent follows a predetermined concentration pattern in the vascular system.

5. (original) A device as claimed in claim 4, characterized in that the predetermined concentration pattern produces an approximately constant contrast display during the contrast-agent injection in the case of an imaging picture of the vascular system.

6. (currently amended) A device as claimed in claim 1-~~or~~4, characterized in that the measuring device is an electrocardiograph apparatus (4, 7).

7. (currently amended) A device for producing an image of the heart (5) comprising a device as claimed in claim 1 for producing an image of the heart (5) and also a device ~~as claimed in claim 4~~ controlling the injection rate of a contrast agent in a vascular system, comprising

- a) an injection pump (8) for injecting the contrast agent at a controllable injection rate;
- b) a measuring device (4, 7) for determining the parameter characteristic of the flowrate in the vascular system;
- c) a control unit (10) that is coupled to the injection pump (8) and the measuring device (4, 7) and is designed to drive the injection pump (8) as a function of the particular value of the characteristic parameter in such a way that the contrast agent follows a predetermined concentration pattern in the vascular system for controlling the injection rate of a contrast agent into the vascular system of the heart (5).

8. (original) A method of producing an image of an object (5) that is subject to cyclic spontaneous movement, comprising the steps of

- a) producing a series of projected X-ray pictures of the object (5);
- b) measuring a parameter characteristic of the spontaneous movement of the object;
- c) controlling the X-ray exposure rate and/or the picture-taking rate as a function of the particular value of the characteristic parameter in such a way that the X-ray exposure rate and/or the picture-taking rate is higher during a predetermined movement phase, to be displayed of the object than during the other movement phases of the object.

9. (original) A method of controlling the injection rate at which a contrast agent is injected into a vascular system, comprising the steps of

- a) measuring the current flowrate in the vascular system;
- b) injecting the contrast agent as a function of the measured flowrate at an injection rate that is such that the contrast agent follows a predetermined concentration pattern in the vascular system.

10. (currently amended) A method of producing an image of the heart (5) comprising the injection of a contrast agent in a method as claimed in claim 9 and also the production of an image of the heart during the contrast-agent injection in a method ~~as claimed in claim 8~~ of producing an image of an object (5) that is subject to cyclic spontaneous movement, comprising the steps of

- a) producing a series of projected X-ray pictures of the object (5);
- b) measuring a parameter characteristic of the spontaneous movement of the object;
- c) controlling the X-ray exposure rate and/or the picture-taking rate as a function of the particular value of the characteristic parameter in such a way that the X-ray exposure rate and/or the picture-taking rate is higher during a predetermined movement phase, to be displayed of the object than during the other movement phases of the object.